Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1. (Currently Amended) A magnetoresistive sensor, comprising:

~~an antiferromagnetic layer;~~

~~a non-magnetic spacer layer;~~

~~a pinned layer disposed between the antiferromagnetic layer and the non-magnetic spacer layer, wherein the pinned layer is further adjacent to both the antiferromagentic layer and the non-magnetic spacer layer;~~

~~a free layer disposed adjacent to the non-magnetic spacer layer;~~

~~a gap layer disposed under the antiferromagnetic layer, the non-magnetic spacer layer, the pinned layer, and the free layer;~~

~~a permanent magnet layer disposed under the antiferromagnetic layer, the non-magnetic spacer layer, the pinned layer, and the free layer, and the gap layer; and~~

a plurality of sensor stack layers, wherein a layer in the plurality of sensor stack layers is a free layer; and

at least one stabilizer depression formed in ~~at least one of the antiferromagnetic layer, the non-magnetic spacer layer, the pinned layer, the free layer, and the gap layer, wherein the at least one stabilizer depression does not extend into the permanent magnet layer, and~~ one sensor stack layer within the plurality of sensor stack layers, wherein the at least one stabilizer depression imparts a restorative force on a magnetic field of [[a]] the free layer of the magnetoresistive sensor to align the magnetic field with a bias direction.

2. (Currently Amended) The magnetoresistive sensor of claim 1, wherein ~~the free layer is disposed between the non-magnetic spacer layer and the gap layer such that~~ the magnetoresistive sensor ~~forms~~ is a top spin valve sensor.

3. (Currently Amended) A magnetoresistive sensor, comprising:

a plurality of sensor stack layers, wherein ~~at least one~~ a layer of the plurality of sensor stack layers is a free layer; ~~layer and at least one of the plurality of sensor stack layers is a pinned layer~~; and

at least one stabilizer depression formed in one sensor stack layer within the plurality of sensor stack layers, wherein the at least one stabilizer depression imparts a restorative force on a magnetic field of [[a]] the free layer of the magnetoresistive sensor to align the magnetic field with a bias direction;

wherein the magnetoresistive sensor is a bottom spin valve sensor.

4. (Previously Presented) The magnetoresistive sensor of claim 3, wherein the one sensor stack layer is one of an antiferromagnetic layer and a pinned layer.

5. (Original) The magnetoresistive sensor of claim 3, wherein the one sensor stack layer is a Gap 1 Alumina layer.

6. (Currently Amended) The magnetoresistive sensor of claim 3, wherein the one sensor stack layer is a sensor stack layer adjacent one of the free layer and a pinned layer, the pinned layer being a layer in the plurality of sensor stack layers.

7. (Previously Presented) The magnetoresistive sensor of claim 3, wherein the at least one stabilizer depression is formed under a permanent magnet.

8. (Currently Amended) The magnetoresistive sensor of claim 1, wherein the ~~magentoresistive~~ magnetoresistive sensor is part of a magnetic media read head.

9. (Previously Presented) The magnetoresistive sensor of claim 3, wherein the at least one stabilizer depression is formed in the one sensor stack layer by milling the at least one stabilizer depression in the one sensor stack layer, and wherein other sensor stack layers of the plurality of sensor stack layers are deposited on the milled one sensor stack layer.

10. (Original) The magnetoresistive sensor of claim 9, wherein the at least one stabilizer depressions have a depth such that after deposition of the other sensor stack layers on the milled one sensor stack layer, the magnetic field of the free layer of the magnetoresistive sensor experiences restorative forces due to the at least one stabilizer depression.

11. (Currently Amended) A method of providing a magnetoresistive sensor, comprising:

~~providing an antiferromagnetic layer;~~

~~providing a non-magnetic spacer layer;~~

~~providing a pinned layer disposed between the antiferromagnetic layer and the non-magnetic spacer layer, wherein the pinned layer is further adjacent to both the antiferromagentic layer and the non-magnetic spacer layer;~~

~~providing a free layer disposed adjacent to the non-magnetic spacer layer;~~

~~providing a gap layer under the antiferromagnetic layer, the non-magnetic spacer layer, the pinned layer, and the free layer;~~

~~providing a permanent magnet layer operatively under the antiferromagnetic layer, the non-magnetic spacer layer, the pinned layer, and the free layer, and the gap layer; and~~

providing at least one stabilizer depression formed in ~~at least one of the antiferromagnetic layer, the non-magnetic spacer layer, the pinned layer, the free layer, and the gap layer, wherein the at least one stabilizer depression does not extend into the permanent magnet layer, and~~ one sensor stack layer within a plurality of sensor stack layers, wherein a layer in the plurality of sensor stack layers is a free layer wherein the at least one stabilizer depression imparts a restorative force on a magnetic field of [[a]] the free layer of the magnetoresistive sensor to align the magnetic field with a bias direction.

12. (Currently Amended) The method of claim 11, wherein ~~the free layer is disposed between the non-magnetic spacer layer and the gap layer such that~~ the magnetoresistive sensor ~~forms~~ is a top spin valve sensor.

13. (Currently Amended) The method of claim 11, wherein the ~~free layer is disposed adjacent the non-magnetic spacer layer and opposite the gap layer such that~~ the magnetoresistive sensor is ~~forms~~ a bottom spin valve sensor.

14-17. (Canceled)

18. (Currently Amended) The method of claim 11, wherein the ~~magentoresistive~~ magnetoresistive sensor is provided in a magnetic media read head.

19. (Withdrawn) The method of claim 11, wherein providing the at least one stabilizer depression includes forming the at least one stabilizer depression in the one sensor stack layer by milling the at least one stabilizer depression in the one sensor stack layer, and wherein providing the plurality of layers includes depositing other sensor stack layers of the plurality of sensor stack layers on the milled one sensor stack layer.

20. (Withdrawn) The method of claim 19, wherein providing the at least one stabilizer depression includes milling the one or more stabilizer depressions to have a depth such that after deposition of the other sensor stack layers on the milled one sensor stack layer, the magnetic field of the free layer of the magnetoresistive sensor experiences restorative forces due to the at least one stabilizer depression.

21. (Currently Amended) The magnetoresistive sensor of claim 1, wherein ~~the free layer is disposed adjacent the spacer layer and opposite the gap layer such that~~ the magnetoresistive sensor is ~~forms~~ a bottom spin valve sensor.

22. (New) The magnetoresistive sensor of claim 1 wherein the at least one stabilizer depression is oriented parallel to a long axis of the magnetoresistive sensor and perpendicular to a magnetic media if the magnetic media is read by the magnetoresistive sensor.

23. (New) The magnetoresistive sensor of claim 3 wherein the at least one stabilizer depression is oriented parallel to a long axis of the magnetoresistive sensor and perpendicular to a magnetic media if the magnetic media is read by the magnetoresistive sensor.

24. (New) The method of claim 11 wherein the step of providing at least one stabilizer depression includes providing at least one stabilizer depression such that the at least one stabilizer depression is oriented parallel to a long axis of the magnetoresistive sensor and perpendicular to a magnetic media if the magnetic media is read by the magnetoresistive sensor.